GARY R. HERBERT
Governor
SPENCER J. COX
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
Division of Water Rights

MICHAEL R. STYLER
Executive Director

KENT L. JONES
State Engineer/Division Director

June 12, 2015

Junction Irrigation Company
c/o David Thompson
135 North 100 West
Junction, UT 84740

Re: Water Right 61-2064

Dear water users:

Diversions from the Mitchell Slough, Mitchell Springs and Sevier River into the Junction ditch for the benefit of the Junction Irrigation Company are limited in the Cox decree, and under water right 61-2064 to 10 cfs.

As I understand it, there is a three foot Parshall flume in the ditch. Ten cfs passing through the flume should read 0.89 feet on the staff gage.

River commissioner Russel Christensen relayed that some users think diversions above 10 cfs are approved. I find no record of such a water right. Please advise me as soon as possible of any water right in addition to 61-2064 and I will adjust the commissioner's distribution schedule accordingly. However, until such a change to the distribution schedule is made, you are instructed to limit diversions into Junction ditch in accordance with a primary flow right of 10 cfs.

Copies of pages 13-14 of the Cox decree and the standard table for a three foot Parshall flume are enclosed for your reference. Please feel free to call me if you wish to discuss this further.

Thank you in advance for your cooperation in this matter,

Sue Odekirk

Sue Odekirk P.E.
Sevier River Distribution Engineer
(801) 538-7431
susanodekirk@utah.gov

CC: Kirk Forbush, Russel Christensen

c.f.s.

Otter Creek Reservoir Company: Period of Use: April 1st to August 1st .75

Period of use from August 1st to October 1st. To be diverted through the Cleave Ditch .50

Whenever the waters available for distribution shall be insufficient to supply all of said primary rights, hereinbefore set forth in Section D, then said rights shall be diminished pro rata.

SECTION D. CONTINUED
SOUTH FORK OF SEVIER RIVER
AND ITS TRIBUTARIES
PIUTE COUNTY

To Junction Irrigation Company, and to the Sevier Valley Canal Company as the successor in interest to the State of Utah: All of the waters of Mitchell Slough located in Piute County, the same not being subject to pro rata distribution, and whenever the flow thereof is less than 16 c.f.s. sufficient of the waters of Sevier River to make in the aggregate, when added to the flow of said slough 16.00

The interest of the Sevier Valley Canal Company in the waters of Mitchell Slough is limited to 6 second feet of the waters thereof, and whenever the flow of said Mitchell Slough shall be less than 16 second feet, the said right of the Sevier Valley Canal Company shall first be supplied, to the extent of any shortage thereof, from water flowing in Sevier River to the credit of said Junction Irrigation Company and the Sevier Valley Canal Company as hereinabove provided.

Sevier Valley Canal Company as successor in interest to the State of Utah: To be diverted from Sevier River at a point 2780 feet south and 285 feet east of the northwest corner of Sec. 11, T. 35 S., R. 5 W., into the Panguitch State Canal as transferred under application A567 State Engineer's office. 4.00

The said right of the said Sevier Valley Canal Company in the use of said 6 second feet of the waters of Mitchell Slough supplemented by the waters of Sevier River, and the right of the said Sevier Valley Canal Company in the use of said 4 second feet to be diverted from Sevier River as hereinabove set out, is limited by the order of the State Engineer of the State of Utah, permitting transfer as to point of diversion and place of use, and the said Sevier Valley Canal Company is entitled to have delivered to the headgate of the canal of said company in Sevier County to be used upon lands in Sevier County, 4 1/2 c.f.s. of said 6 second feet of the waters of Mitchell Slough as supplemented by the waters of Sevier River as herein set out, and

c.f.s.

to have delivered to it at the headgate of its said canal 3 second feet out of said 4 second feet to be diverted from Sevier River, as distributed hereinabove to the said Sevier Valley Canal Company as successor in interest to the State of Utah, and the remaining 1 1/2 second feet of said 6 second feet and the remaining 1 second foot of said 4 second feet shall remain in the river as a source of supply for the rights hereinbefore set out in Section A.

Junction Middle Ditch Irrigation Company. To be diverted from the South Fork of the Sevier River at a point 1200 feet South and 1800 feet East of the Northwest corner of Section 16, Twp 30 S., R. 3 W., into the Junction Middle Ditch for use during entire year. 3.99

To Piute Reservoir & Irrigation Company (from the South Fork of the Sevier River and its tributaries) for culinary, stockwatering, and irrigation purposes, during the entire year .84 c.f.s., said water to be diverted from the Sevier River at the points and for use upon the lands as hereinafter described in connection with the storage filings of said company.

Whenever it shall become necessary to supply the said rights of Junction Irrigation Company and the Sevier Valley Canal Company from the Sevier River, as hereinabove provided, and the water in the river shall not be sufficient to supply said rights, and the said right of Junction Middle Ditch Irrigation Company of 3.99 c.f.s., and the said right of the Piute Reservoir & Irrigation Company of .84 c.f.s., than all said rights shall be diminished pro rata, but said rights are not to be prorated with any other rights set out in Section D.

TO BE DIVERTED OUT OF
EAST FORK OF SEVIER RIVER
PIUTE COUNTY

Piute Reservoir & Irrigation Company. Period of Use:
January 1st to June 1st 3.00
Period of use: June 1st to December 31st 1.66

TO BE DIVERTED FROM PRICE SPRING
PIUTE COUNTY

Piute Reservoir & Irrigation Company. For use during entire year. 1.78

DURKEE AND WILLOW SPRINGS
PIUTE COUNTY

To Forrest King: All of the water in Durkee and Willow Springs.

Water Measurement Manual

A Water Resources Technical Publication

U.S. Department of the Interior
Bureau of Reclamation
Third edition

Table A8-12 [continued]. Free-flow discharges in ft^3/sec through 1- to 8-foot Parshall flumes. Discharges for 2- to 8-ft flumes computed from the formula $Q = 4.00 W h_a^{1.522(W^{0.026})}$. Discharges for 1-ft flume computed from the formula $Q = 3.95 h_a^{1.55}$.

Upper Head h_a, ft	Discharge for flumes of various throat widths, W							
	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.60	1.79	3.62	5.39	7.15	8.89	10.6	12.4	14.1
.61	1.84	3.72	5.53	7.34	9.13	10.9	12.7	14.5
.62	1.88	3.81	5.68	7.53	9.37	11.2	13.0	14.8
.63	1.93	3.91	5.82	7.72	9.61	11.5	13.4	15.2
.64	1.98	4.01	5.97	7.91	9.85	11.8	13.7	15.6
.65	2.03	4.10	6.11	8.11	10.1	12.1	14.0	16.0
.66	2.07	4.20	6.26	8.31	10.3	12.4	14.4	16.4
.67	2.12	4.30	6.41	8.51	10.6	12.7	14.7	16.8
.68	2.17	4.40	6.56	8.71	10.8	13.0	15.1	17.2
.69	2.22	4.50	6.71	8.91	11.1	13.3	15.5	17.6
.70	2.27	4.60	6.86	9.11	11.4	13.6	15.8	18.0
.71	2.32	4.71	7.02	9.32	11.6	13.9	16.2	18.5
.72	2.37	4.81	7.17	9.53	11.9	14.2	16.5	18.9
.73	2.43	4.91	7.33	9.74	12.1	14.5	16.9	19.3
.74	2.48	5.02	7.49	9.95	12.4	14.8	17.3	19.7
.75	2.53	5.12	7.65	10.2	12.7	15.2	17.7	20.2
.76	2.58	5.23	7.81	10.4	12.9	15.5	18.0	20.6
.77	2.63	5.34	7.97	10.6	13.2	15.8	18.4	21.0
.78	2.69	5.44	8.13	10.8	13.5	16.1	18.8	21.5
.79	2.74	5.55	8.30	11.0	13.8	16.5	19.2	21.9
.80	2.80	5.66	8.46	11.3	14.0	16.8	19.6	22.4
.81	2.85	5.77	8.63	11.5	14.3	17.2	20.0	22.8
.82	2.90	5.88	8.79	11.7	14.6	17.5	20.4	23.3
.83	2.96	5.99	8.96	11.9	14.9	17.8	20.8	23.7
.84	3.01	6.11	9.13	12.2	15.2	18.2	21.2	24.2
.85	3.07	6.22	9.30	12.4	15.5	18.5	21.6	24.6
.86	3.13	6.33	9.48	12.6	15.7	18.9	22.0	25.1
.87	3.18	6.45	9.65	12.8	16.0	19.2	22.4	25.6
.88	3.24	6.56	9.82	13.1	16.3	19.6	22.8	26.1
.89	3.30	6.68	10.0	13.3	16.6	19.9	23.2	26.5
.90	3.35	6.79	10.2	13.5	16.9	20.3	23.7	27.0
.91	3.41	6.91	10.4	13.8	17.2	20.6	24.1	27.5
.92	3.47	7.03	10.5	14.0	17.5	21.0	24.5	28.0
.93	3.53	7.15	10.7	14.3	17.8	21.4	24.9	28.5
.94	3.59	7.27	10.9	14.5	18.1	21.7	25.4	29.0
.95	3.65	7.39	11.1	14.8	18.4	22.1	25.8	29.5
.96	3.71	7.51	11.3	15.0	18.7	22.5	26.2	30.0
.97	3.77	7.63	11.4	15.2	19.1	22.9	26.7	30.5
.98	3.83	7.75	11.6	15.5	19.4	23.2	27.1	31.0
.99	3.89	7.88	11.8	15.7	19.7	23.6	27.6	31.5

Table A8-12 [continued]. Free-flow discharges in ft^3/sec through 1- to 8-foot Parshall flumes. Discharges for 2- to 8-ft flumes computed from the formula $Q = 4.00 W h_a^{1.522(W^{0.026})}$. Discharges for 1-ft flume computed from the formula $Q = 3.95 h_a^{1.55}$.

Upper Head h_a, ft	Discharge for flumes of various throat widths, W							
	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
1.00	3.95	8.00	12.0	16.0	20.0	24.0	28.0	32.0
1.01	4.01	8.12	12.2	16.3	20.3	24.4	28.4	32.5
1.02	4.07	8.25	12.4	16.5	20.6	24.8	28.9	33.0
1.03	4.14	8.37	12.6	16.8	21.0	25.2	29.4	33.6
1.04	4.20	8.50	12.8	17.0	21.3	25.5	29.8	34.1
1.05	4.26	8.63	13.0	17.3	21.6	25.9	30.3	34.6
1.06	4.32	8.76	13.1	17.5	21.9	26.3	30.7	35.1
1.07	4.39	8.88	13.3	17.8	22.3	26.7	31.2	35.7
1.08	4.45	9.01	13.5	18.1	22.6	27.1	31.7	36.2
1.09	4.51	9.14	13.7	18.3	22.9	27.5	32.1	36.8
1.10	4.58	9.27	13.9	18.6	23.3	27.9	32.6	37.3
1.11	4.64	9.40	14.1	18.9	23.6	28.3	33.1	37.8
1.12	4.71	9.54	14.3	19.1	23.9	28.8	33.6	38.4
1.13	4.77	9.67	14.5	19.4	24.3	29.2	34.1	38.9
1.14	4.84	9.80	14.7	19.7	24.6	29.6	34.5	39.5
1.15	4.91	9.93	14.9	19.9	25.0	30.0	35.0	40.1
1.16	4.97	10.1	15.1	20.2	25.3	30.4	35.5	40.6
1.17	5.04	10.2	15.3	20.5	25.7	30.8	36.0	41.2
1.18	5.11	10.3	15.6	20.8	26.0	31.2	36.5	41.7
1.19	5.17	10.5	15.8	21.1	26.4	31.7	37.0	42.3
1.20	5.24	10.6	16.0	21.3	26.7	32.1	37.5	42.9
1.21	5.31	10.7	16.2	21.6	27.1	32.5	38.0	43.5
1.22	5.38	10.9	16.4	21.9	27.4	33.0	38.5	44.0
1.23	5.44	11.0	16.6	22.2	27.8	33.4	39.0	44.6
1.24	5.51	11.2	16.8	22.5	28.1	33.8	39.5	45.2
1.25	5.58	11.3	17.0	22.8	28.5	34.3	40.0	45.8
1.26	5.65	11.4	17.2	23.0	28.9	34.7	40.5	46.4
1.27	5.72	11.6	17.4	23.3	29.2	35.1	41.1	47.0
1.28	5.79	11.7	17.7	23.6	29.6	35.6	41.6	47.6
1.29	5.86	11.9	17.9	23.9	30.0	36.0	42.1	48.2
1.30	5.93	12.0	18.1	24.2	30.3	36.5	42.6	48.8
1.31	6.00	12.2	18.3	24.5	30.7	36.9	43.1	49.4
1.32	6.07	12.3	18.5	24.8	31.1	37.4	43.7	50.0
1.33	6.15	12.4	18.8	25.1	31.4	37.8	44.2	50.6
1.34	6.22	12.6	19.0	25.4	31.8	38.3	44.7	51.2
1.35	6.29	12.7	19.2	25.7	32.2	38.7	45.3	51.8
1.36	6.36	12.9	19.4	26.0	32.6	39.2	45.8	52.4
1.37	6.43	13.0	19.6	26.3	33.0	39.6	46.3	53.1
1.38	6.51	13.2	19.9	26.6	33.3	40.1	46.9	53.7
1.39	6.58	13.3	20.1	26.9	33.7	40.6	47.4	54.3